

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An optoelectronic-device substrate, comprising:
~~_____ a memory cell array including a plurality of memory cells that is arranged in matrix form and digitally driven; and~~
~~a pixel electrode; electrode to retrieve pixel data stored in the memory cells as an electrical signal;~~
~~_____ a storage unit for storing pixel data;~~
~~each of the memory cells having a phase-inversion circuit to invert the that outputs a phase-inversion signal for converting a phase of transmitted pixel data, and a data-inversion signal having a phase that is inverted by the phase-inversion circuit being transmitted to the pixel electrode. from the storage unit;~~
~~_____ a first switch for generating a data-inversion signal, based on the phase-inversion signal; and~~
~~_____ a second switch for switching between the data-inversion signal from the first switch and a zero-data signal, the second switch selecting the data-inversion signal when pixel data is stored in the storage unit, and the zero-data signal when pixel data is not stored in the storage unit, the selected one of the data-inversion signal and the zero-data signal being transmitted to the pixel electrode.~~
2. (Canceled)
3. (Canceled)
4. (Currently Amended) The optoelectronic-device substrate according to ~~Claim~~ 2Claim 1, the storage unit being formed as an SRAM.

5. (Currently Amended) The optoelectronic-device substrate according to Claim 1, ~~the memory cell array including:~~further comprising:

a plurality of first signal lines to connect one group of address terminals included in one group of the ~~memory cells~~storage units in parallel, the one group of the ~~memory cells~~storage units being provided along a row direction;

a plurality of second signal lines to connect one group of data terminals included in one group of the ~~memory cells~~storage units in parallel, the one group of the ~~memory cells~~storage units being provided along a column direction; and

a plurality of third signal lines to connect one group of phase-inversion terminals included in one group of the ~~memory cells~~storage units in parallel, the one group of the ~~memory cells~~storage units being provided along the row direction or the column direction; and

the optoelectronic-device substrate further including:

a first driver circuit to transmit address signals in sequence to the ~~memory cells~~storage units via the plurality of first signal lines, the ~~memory cells~~storage units being provided along the row direction;

a second driver circuit to transmit the pixel data to the ~~memory cells~~storage units at one time via the plurality of second signal lines, the ~~memory cells~~storage units being provided along the column direction; and

a third driver circuit to transmit phase-inversion signals to each group of the ~~memory cells~~storage units via the plurality of third signal lines, the group of the ~~memory cells~~storage units being provided along the row direction or the column direction.

6. (Currently Amended) The optoelectronic-device substrate according to Claim 4, ~~the~~a third driver circuit having a phase-inversion circuit to invert the phase of the pixel

data, and the phase-inversion circuit inverting the phase of the pixel data before the pixel data is transmitted to the ~~memory cells~~storage units.

7. (Currently Amended) The optoelectronic-device substrate according to Claim 1, ~~the memory cell array including:~~further comprising:

a plurality of first signal lines to connect one group of address terminals included in one group of the ~~memory cells~~storage units in parallel, the one group of the ~~memory cells~~storage units being provided along a row direction;

a plurality of second signal lines to connect one group of data terminals included in one group of the ~~memory cells~~storage units in parallel, the one group of the ~~memory cells~~storage units being provided along a column direction; and

a plurality of third signal lines to connect one group of phase-inversion terminals included in one group of the ~~memory cells~~storage units in parallel, the one group of the ~~memory cells~~storage units being provided along the row direction or the column direction; and

the optoelectronic-device substrate further including:

a row-address-decoder driver circuit to transmit row-address data for selecting any of rows of the ~~memory cells~~storage units via the plurality of first signal lines, the ~~memory cells~~storage units being provided along the row direction;

a column-address-decoder driver circuit to transmit column-address data to select any of columns of the ~~memory cells~~storage units via the plurality of second signal lines, the ~~memory cells~~storage units being provided along the column direction, and the pixel data output to the ~~memory cells~~storage units designated by the row-address data and the column-address data; and

a phase-inversion driver circuit to transmit a phase-inversion signal to each group of the ~~memory-cells~~storage units via the plurality of third signal lines, the each group of the ~~memory-cells~~storage units being provided along the row direction or the column direction.

8. (Currently Amended) The optoelectronic-device substrate according to Claim 7, the phase-inversion driver circuit having a phase-inversion circuit to invert the phase of the pixel data,

the phase-inversion circuit inverting the phase of the pixel data in a predetermined cycle regardless of the number of the ~~memory-cells~~storage units whose display information is rewritten according to the pixel data.

9. (Previously Presented) A digitally-driven liquid-crystal display, comprising:
the optoelectronic-device substrate according to claim 1;
a counter substrate;
a liquid crystal layer provided between the optoelectronic device substrate and the counter substrate; and

a common electrode to supply a voltage having a potential that is equivalent to the potential of zero data transmitted to the optoelectronic-device substrate.

10. (Previously Presented) An electronic apparatus, comprising:
the digitally driven liquid crystal display according to claim 9; and
a display unit to display an image through the digitally-driven liquid-crystal display.

11. (Previously Presented) A projector, comprising:
a light-source unit to supply projection light;
the digitally-driven liquid-crystal display according to Claim 9;
a control circuit to control the digitally-driven liquid-crystal display; and

a projection-lens system to magnify and project an image of the digitally-driven liquid-crystal display.

12. (Currently Amended) A method of driving an optoelectronic-device substrate that includes a ~~memory-cell~~storage unit array including a plurality of ~~memory-cells~~storage units that is arranged in matrix form along a row direction and a column direction and that is digitally driven, and a pixel electrode to retrieve pixel data stored in the ~~memory-cells~~storage units as an electrical signal, the method comprising:

performing at least one of inverting ~~the a~~ phase of the pixel data before the pixel data is transmitted to the ~~memory-cells~~storage units, and inverting the phase of the pixel data after the pixel data is transmitted to the ~~memory-cells~~storage units, the performing comprising:

providing a phase-inversion signal for converting the phase of pixel data from the storage unit;

generating a data-inversion signal based on the phase-inversion signal;

selecting the data-inversion signal when pixel data is stored in the storage unit, and selecting a zero-data signal when pixel data is not stored in the storage unit; and

transmitting the selected signal to the pixel electrode.

13. (Canceled)

14. (Previously Presented) The method of driving an optoelectronic-device substrate according to Claim 12, the performing including selecting the memory cells provided along the row direction in sequence, and inverting the phase of the pixel data at the same time.

15. (Currently Amended) The method for driving an optoelectronic-device substrate according to Claim 14, the performing including transmitting a cycle with which the phase-inversion signal to the ~~memory-cells~~storage units provided along the row direction, and

making a cycle with which the pixel data is transmitted to the ~~memory cells~~storage units provided along the row direction variable so that the cycles can change in synchronization, whereby a cycle of ~~the~~ sub-frames is made variable so as to present gray scale.